

Appendix C

Additional Tables and Graphs: Analyses of Endogenous Productivity Growth and Technical Biases

Figure C.1

Economic Impacts

Without CAA and Endogenous Technical Change

Figures C.2 - C.5

Supply Prices, Domestic Supply and Labor Hours

Without Endogenous Technical Change

Without CAA and Endogenous Technical Change

Table C.1 - C.6

Figures C.6 - C.7

Equivalent Variations and Social Welfare

Without Endogenous Technical Change

Without CAA and Endogenous Technical Change

Figure C.1

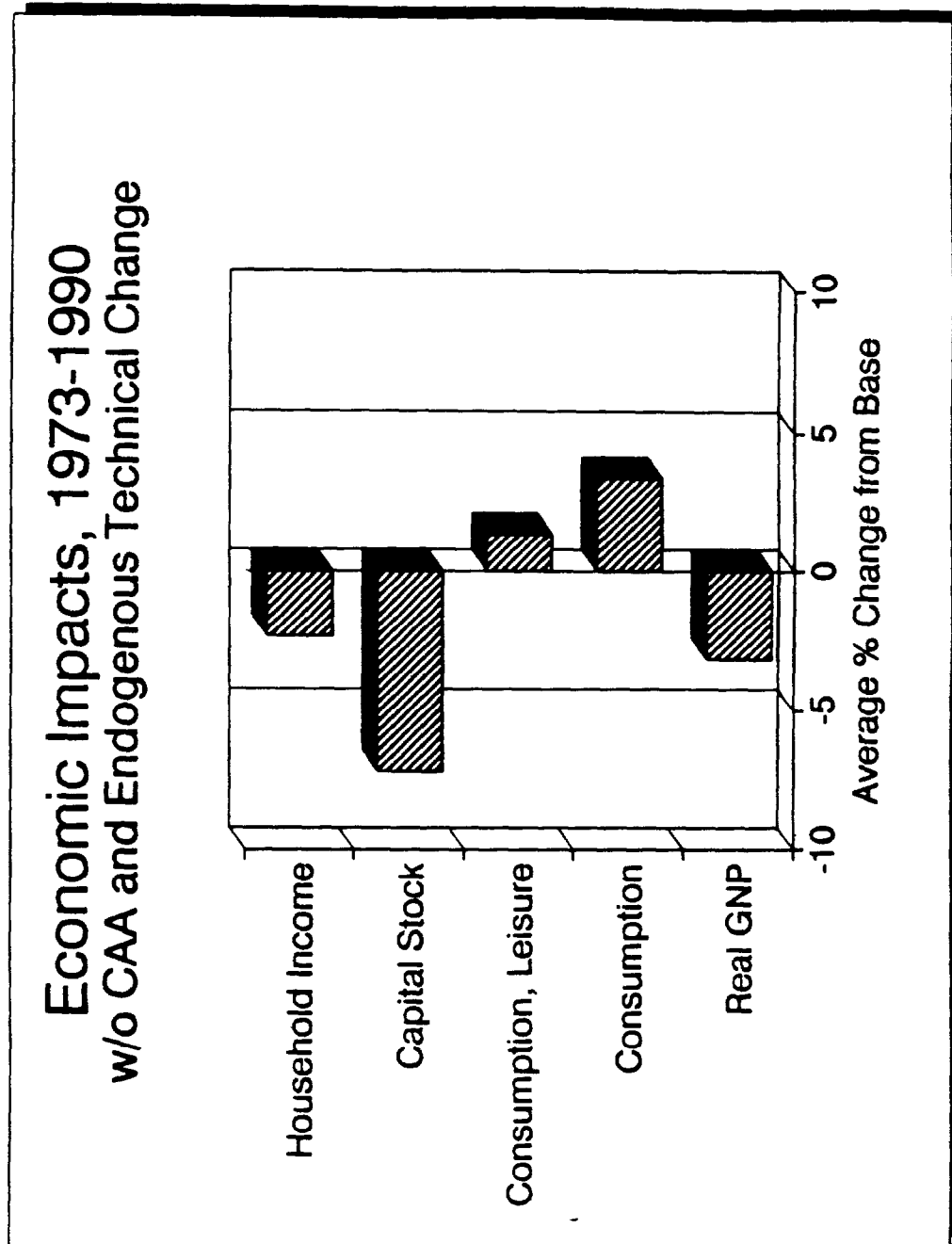


Figure C.2

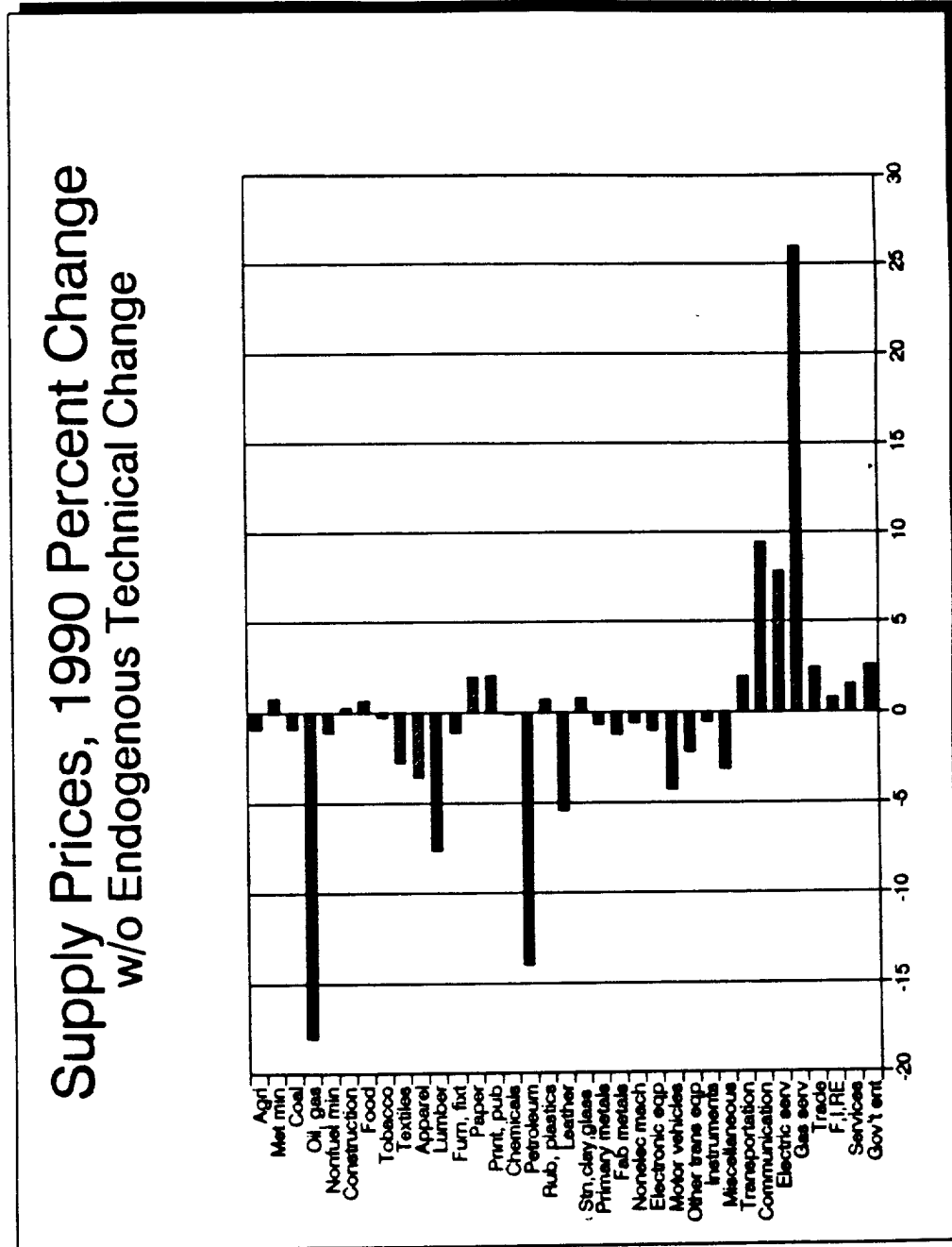


Figure C.3

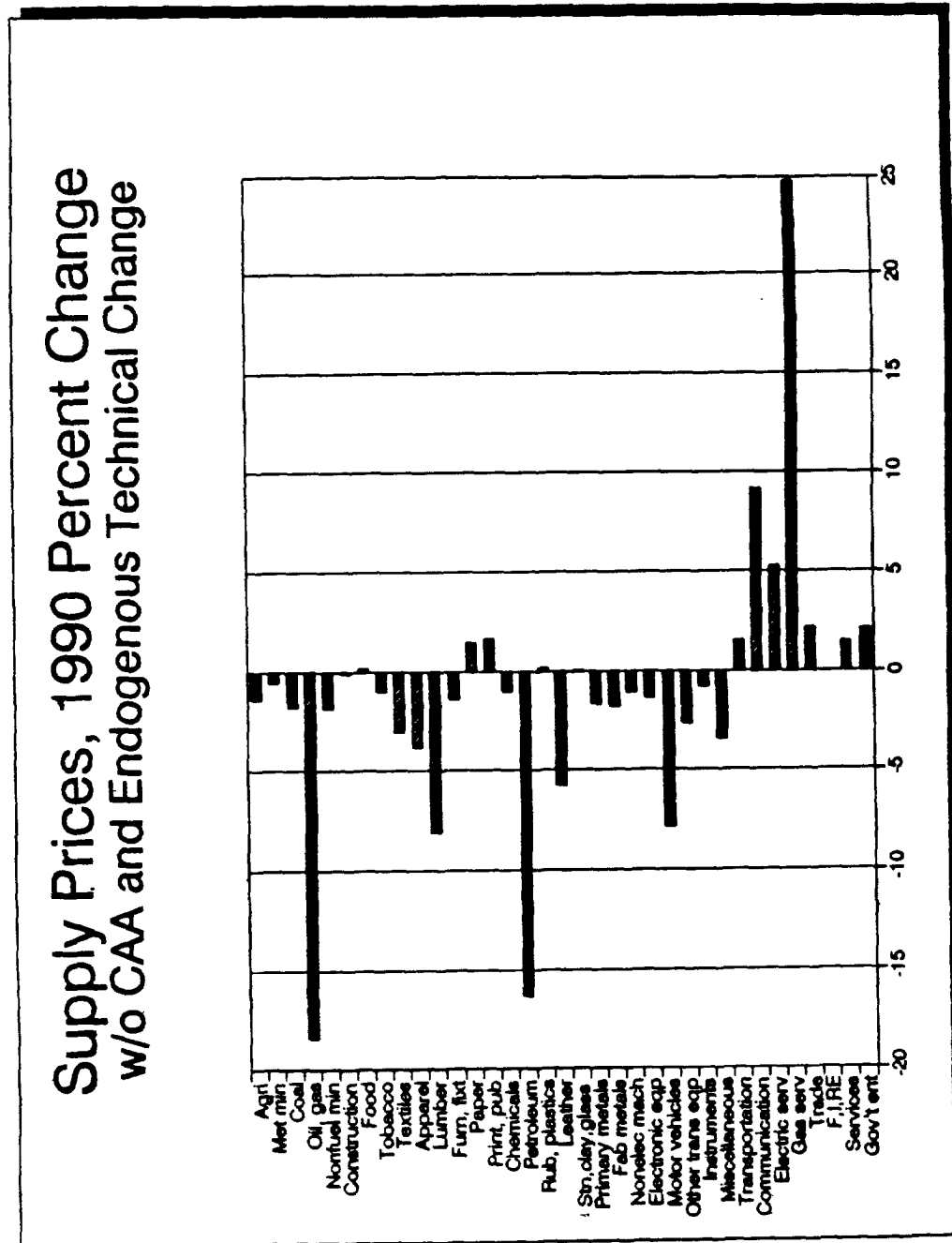


Figure C.4

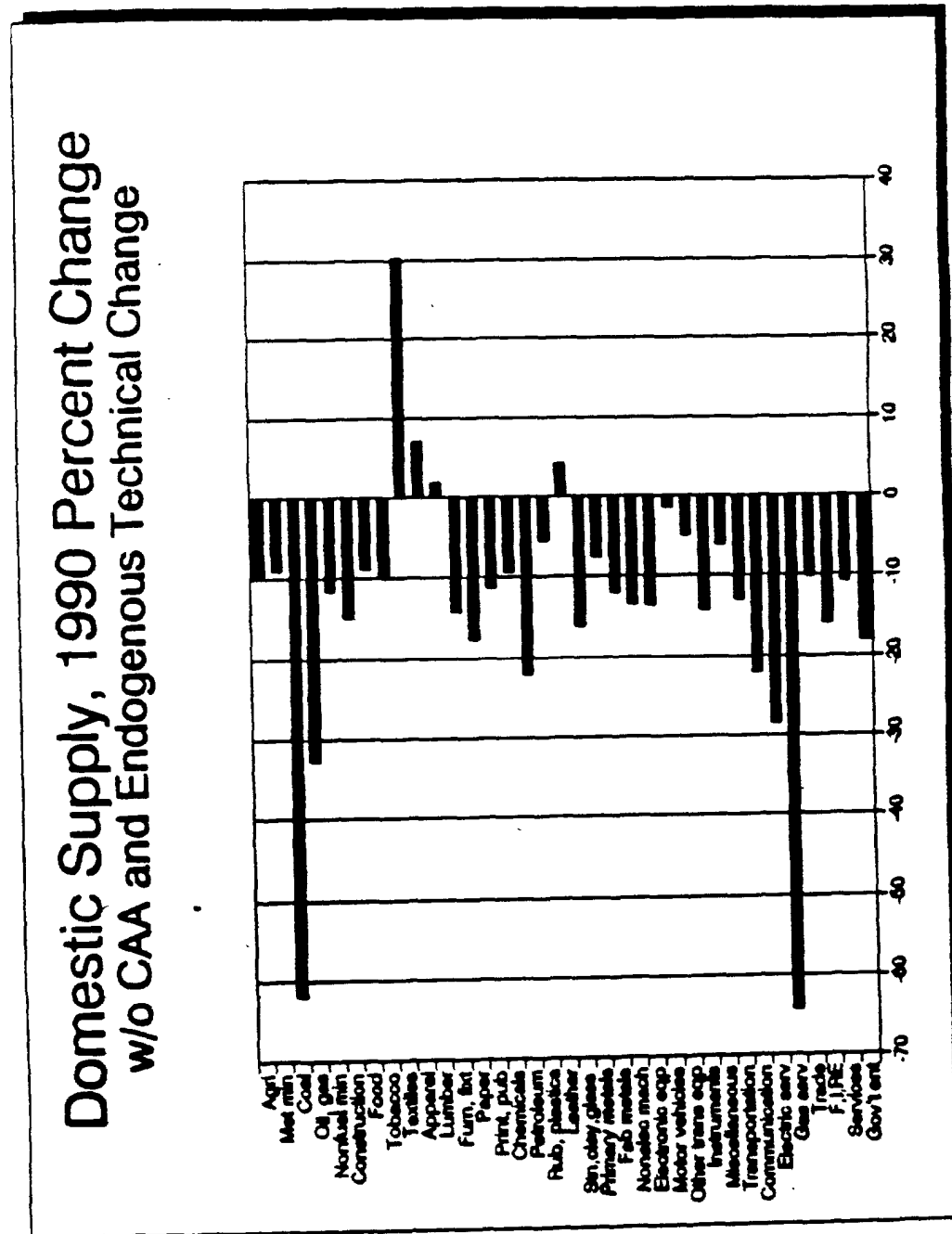


Figure C.5

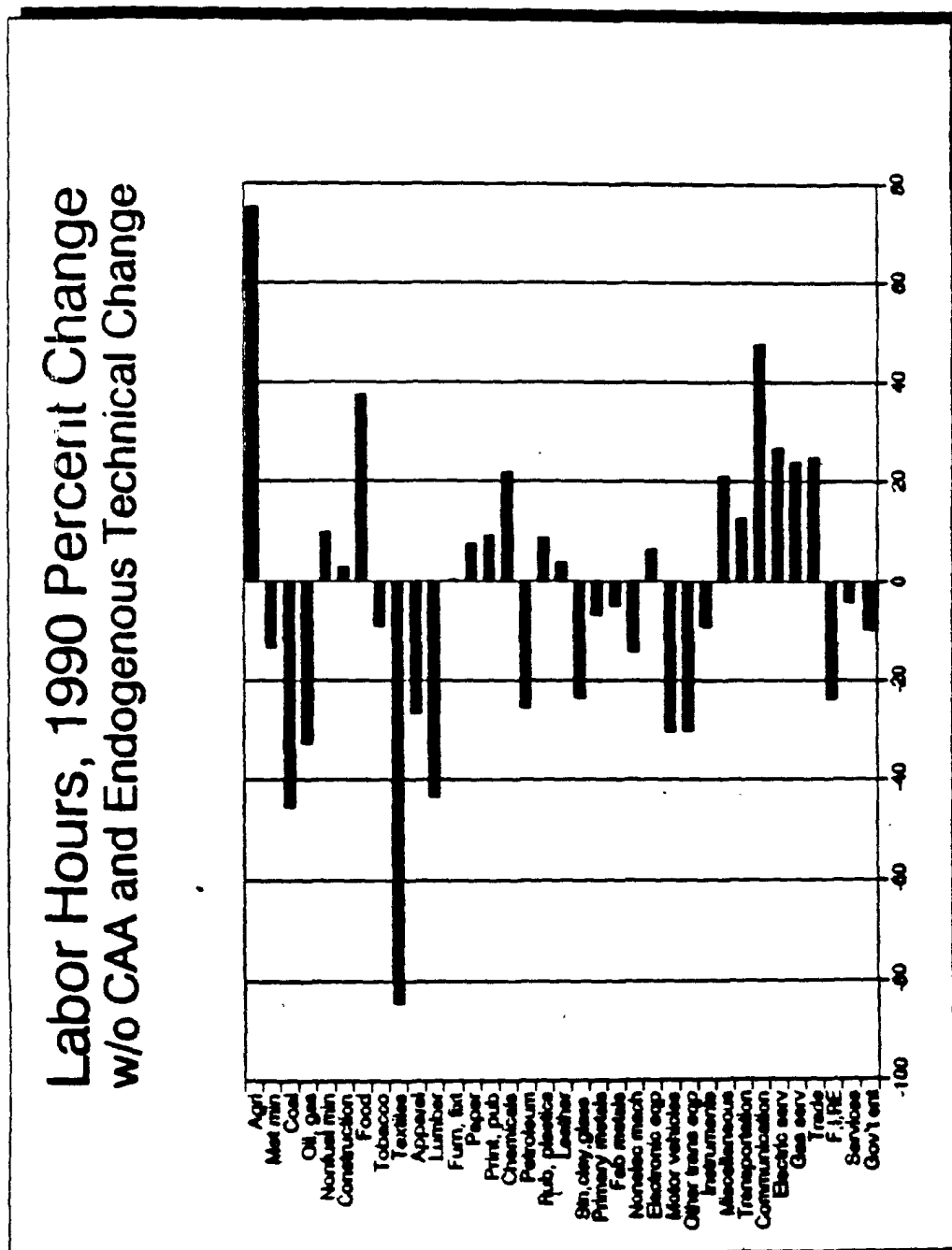


Table C.1
Equivalent Variations And Social Welfare

*Equivalent Variations in Lifetime Expenditure
Base Case Without Endogenous Productivity Growth
1990 Dollars*

	<u>Size</u> <u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	-2827	-2827	-2923	-3168	-3135	-3467	-3590
Med	-5711	-5712	-5904	-6394	-6330	-6991	-7236
High	-11537	-11538	11923	-12902	-12773	-14095	-14586
	<u>Age</u> <u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>	
Low	-2164	-2756	-3168	-3338	Text	Text	
Med	-4385	-5569	-6394	-6732	-6962	-7014	
High	-8883	-11252	-12902	-13578	-14037	-14141	
	<u>Region</u> <u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>Race</u> <u>White</u>	<u>NWhite</u>	
Low	-3168	-3014	-3293	-3044	-3168	-3714	
Med	-6394	-6083	-6642	-6146	-6394	-7485	
High	-12902	-12282	-13397	-12406	-12902	-15083	
	<u>Locale</u> <u>NFarm</u>	<u>Farm</u>	<u>Sex</u> <u>Male</u>	<u>Female</u>			
Low	-3168	-2912	-3168	-3090			
Med	-6394	-5882	-6394	-6238			
High	-12902	-11879	-12902	-12591			

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.
Low, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table C.2
Equivalent Variations And Social Welfare

*Equivalent Variations as a Proportion of Lifetime Expenditure
Base Case Without Endogenous Productivity Growth*

	<i>Size</i>						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7 +</u>
Low	-.00573	-.00573	-.00593	-.00642	-.00636	-.00703	-.00728
Med	-.00579	-.00579	-.00599	-.00648	-.00642	-.00709	-.00734
High	-.00585	-.00585	-.00604	-.00654	-.00647	-.00714	-.00739

	<i>Age</i>					
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
Low	-.00439	-.00559	-.00642	-.00677	-.00700	-.00705
Med.	-.00445	-.00565	-.00648	-.00683	-.00706	-.00711
High	-.00450	-.00570	-.00654	-.00688	-.00712.	-.00717

	<i>Region</i>				<i>Race</i>	
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>
Low	-.00642	-.00611	-.00668	-.00617	-.00642	-.00753
Med	-.00648	-.00617	-.00673	-.00623	-.00648	-.00759
High	-.00654	-.00623	-.00679	-.00629	-.00654	-.00765

	<i>Locale</i>		<i>Sex</i>	
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>
Low	-.00642	-.00591	-.00642	-.00627
Med	-.00648	-.00596	-.00648	-.00632
High	-.00654	-.00602	-.00654	-.00638

Reference household: Size 4, Age 35-44, Northeast Nonfarm, White Male
LOW, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table C.3
Equivalent Variations And Social Welfare

*Change in Social Welfare
Base Case Without Endogenous Productivity Growth
Billions of 1990 Dollars*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	-398	-619	221
Least	-493	-619	126

*Change in Social Welfare as a
Proportion of Lifetime Expenditure*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	-.00384	-.00597	.00213
Least	-.00476	-.00597	.00121

Index of Relative Progressivity

<u>Weight given to equality</u>	<u>Index</u>
Greatest	-.00020
Least	-.00015

Table C.4
Equivalent Variations And Social Welfare

*Equivalent Variations in Lifetime Expenditure upon
Elimination of the CAA Compliance Costs
and Endogenous Productivity Growth
1990 Dollars*

	Size						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	694	721	598	272	324	-123	-271
Med	1029	1084	838	187	290	-602	-901
High	1343	1452	959	-339	-134	-1919	-2514

	Age					
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>25-54</u>	<u>55-64</u>	<u>65+</u>
Low	1579	809	272	59	-88	-137
Med	2801	1259	187	-239	-531	-631
High	4886	1802	-339	-1195	-1776	-1976

	Region				Race	
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>
Low	272	479	75	415	272	-535
Med	187	602	-208	472	187	-1427
High	-339	489	-1129	230	-339	-3568

	Locale		Sex	
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>
Low	272	605	272	292
Med	187	853	187	226
High	-339	989	-339	-264

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White. Male
Low, medium and high refer to the time paths of expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table C.5
Equivalent Variations And Social Welfare

*Equivalent Variations as a Proportion of Lifetime Expenditure
upon Elimination of the CAA Compliance Costs
and Endogenous Productivity Growth*

	Size						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	.00141	.00146	.00121	.00055	.00066	-.00025	-.00055
Med	.00104	.00110	.00085	.00019	.00030	-.00061	-.00091
High	.00068	.00074	.00049	-.00017	-.00007	-.00097	-.00128

	Age					
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
Low	.00320	.00164	.00055	.00012	-.00018	-.00028
Med	.00284	.00128	.00019	-.00024	-.00054	-.00064
High	.00248	.00091	-.00017	-.00061	-.00090	-.00100

	Region				Race	
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>
Low	.00055	.00097	.00015	.00084	.00055	-.00109
Med	.00019	.00061	-.00021	.00048	.00019	-.00145
High	-.00017	.00025	-.00057	.00012	-.00017	-.00181

	Locale		Sex	
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>
Low	.00055	.00123	.00055	.00059
Med	.00019	.00086	.00019	.00023
High	-.00017	.00050	-.00017	-.00013

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.
Low, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table C.6
Equivalent Variations And Social Welfare

*Change in Social Welfare upon
Elimination of the CAA Compliance Costs
and Endogenous Productivity Growth
Billions of 1990 Dollars*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	-7	-75	69
Least	1	-75	77

*Change in Social Welfare as a
Proportion of Lifetime Expenditure*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	-.00007	-.90073	.00066
Least	.00001	-.00073	.00074

Index of Relative Progressivity

<u>Weight given to equality</u>	<u>Index</u>
Greatest	.00038
Least	.00058

Figure C.6

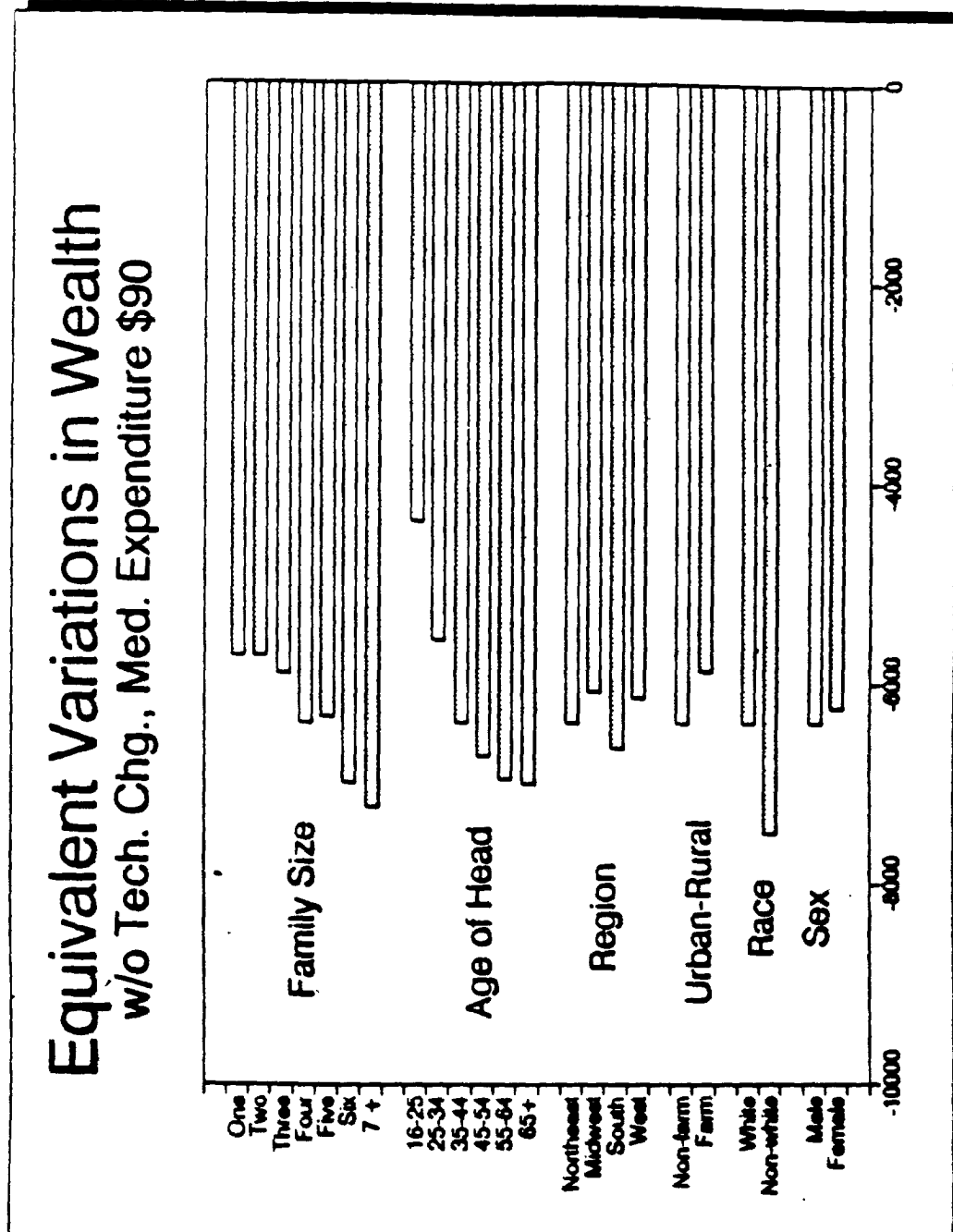
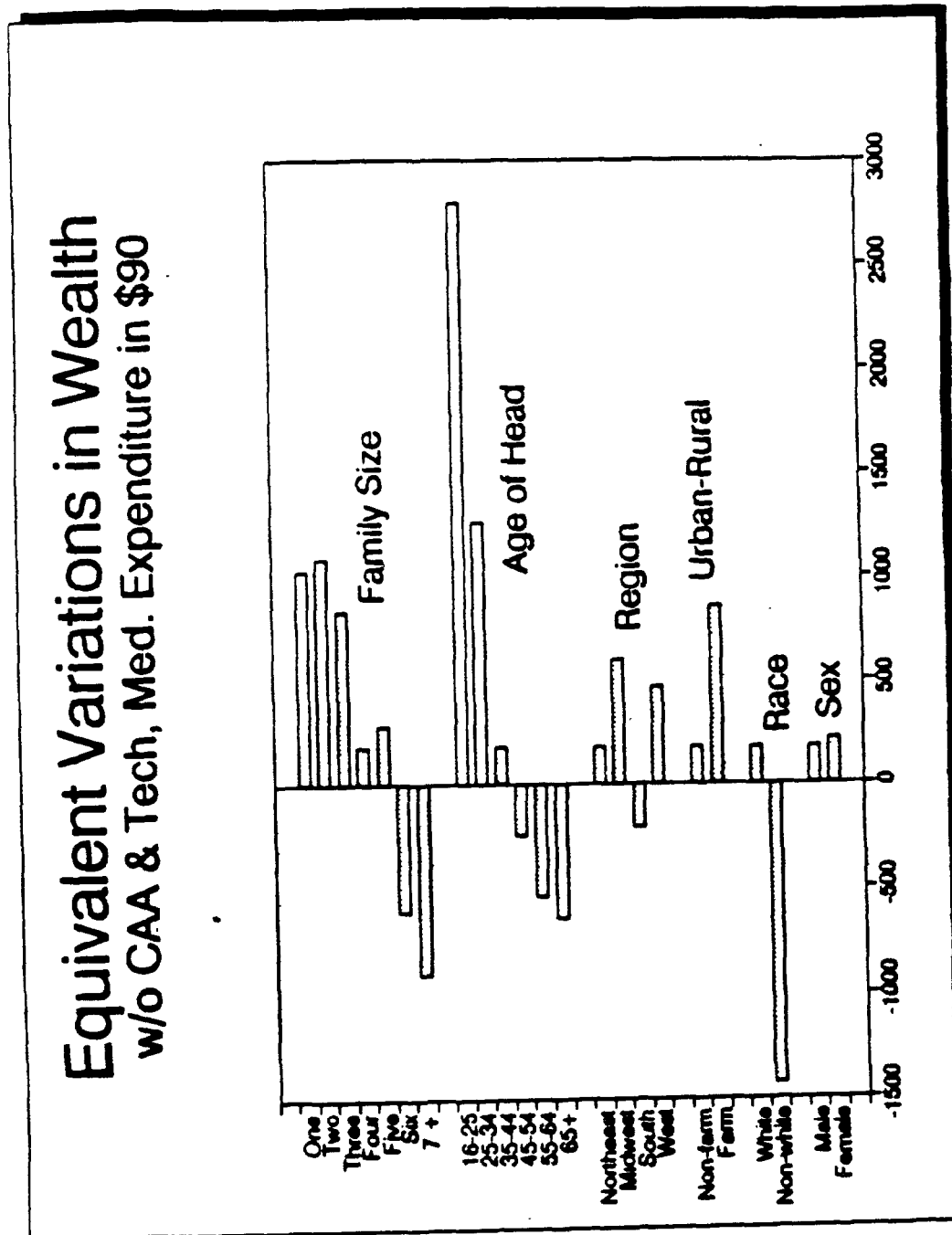


Figure C.7



Appendix D

Additional Tables and Graphs: Foreign Savings and Current Account Surplus Analyses

Figures D.1 - D.2

Economic Impacts
Foreign Currency, Real US Dollars

Figure D.3

Real Consumption, Investment and Income
Foreign Currency, Real US Dollars

Figures D.4 - D.9

Supply Prices, Domestic Supply and Labor Hours
Foreign Currency, Real US Dollars

Tables D.1 - D.6

Figures D.10 - D.11

Equivalent Variations and Social Welfare
Foreign Currency, Real US Dollars

Figure D.1

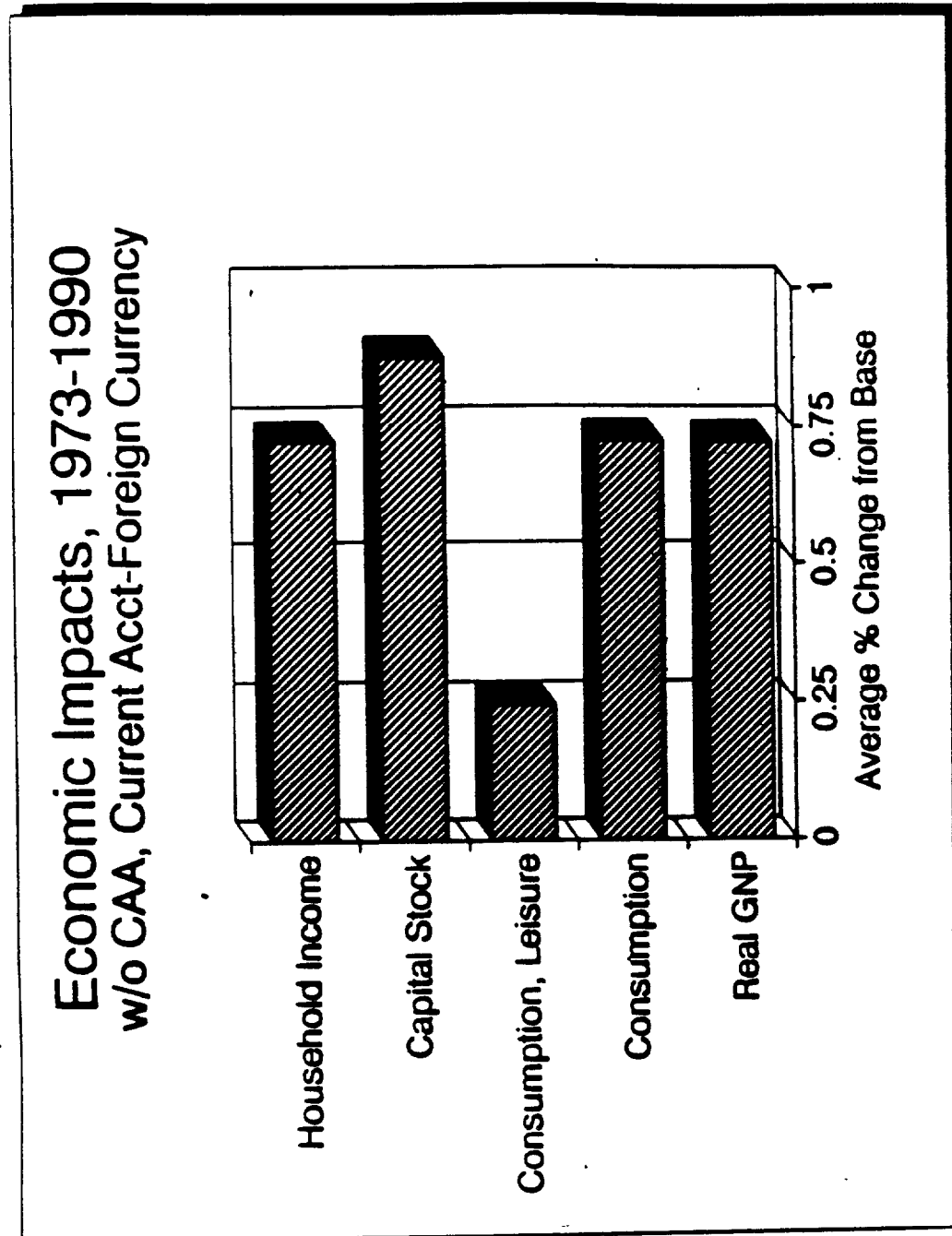


Figure D.2

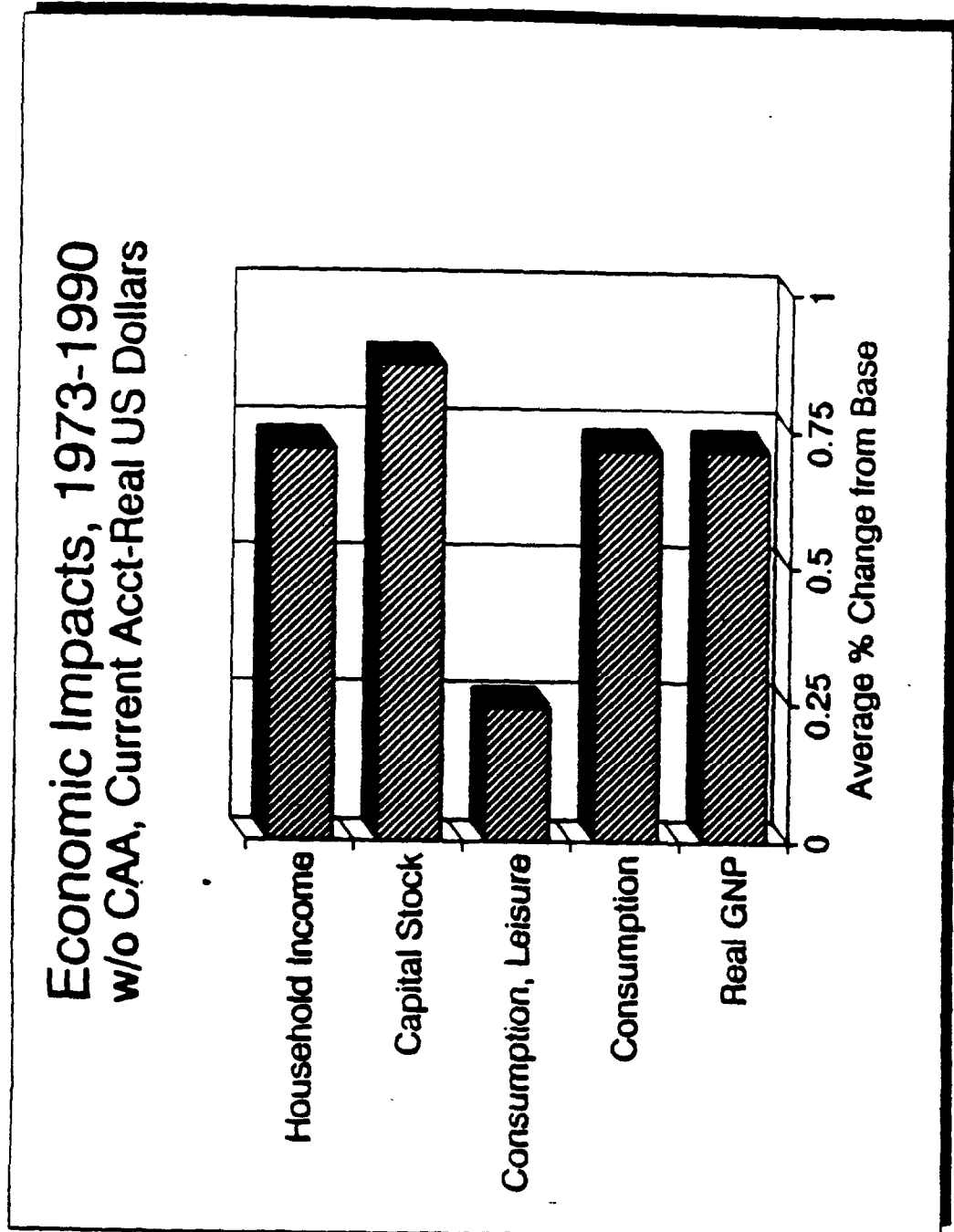


Figure D.3

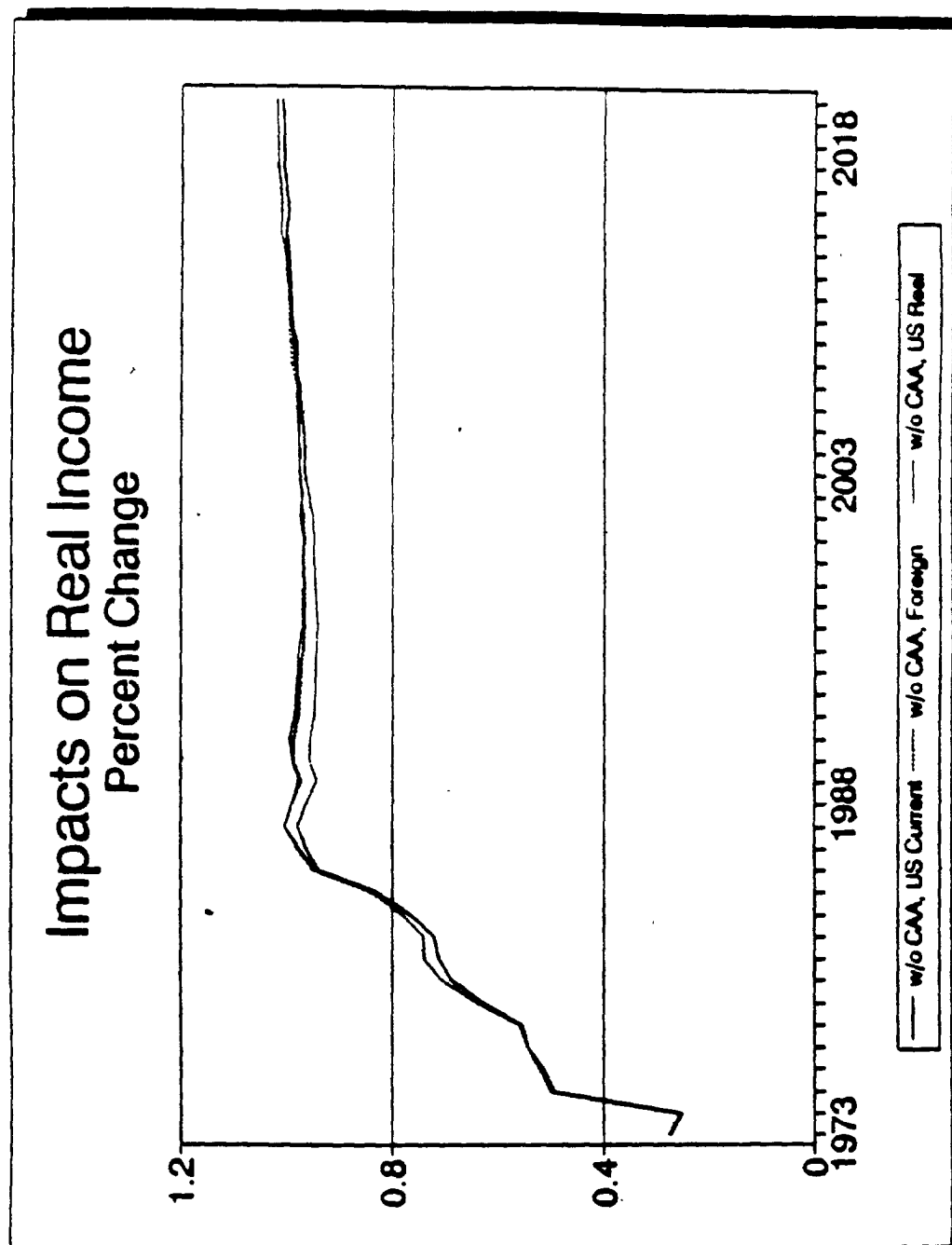


Figure D.4

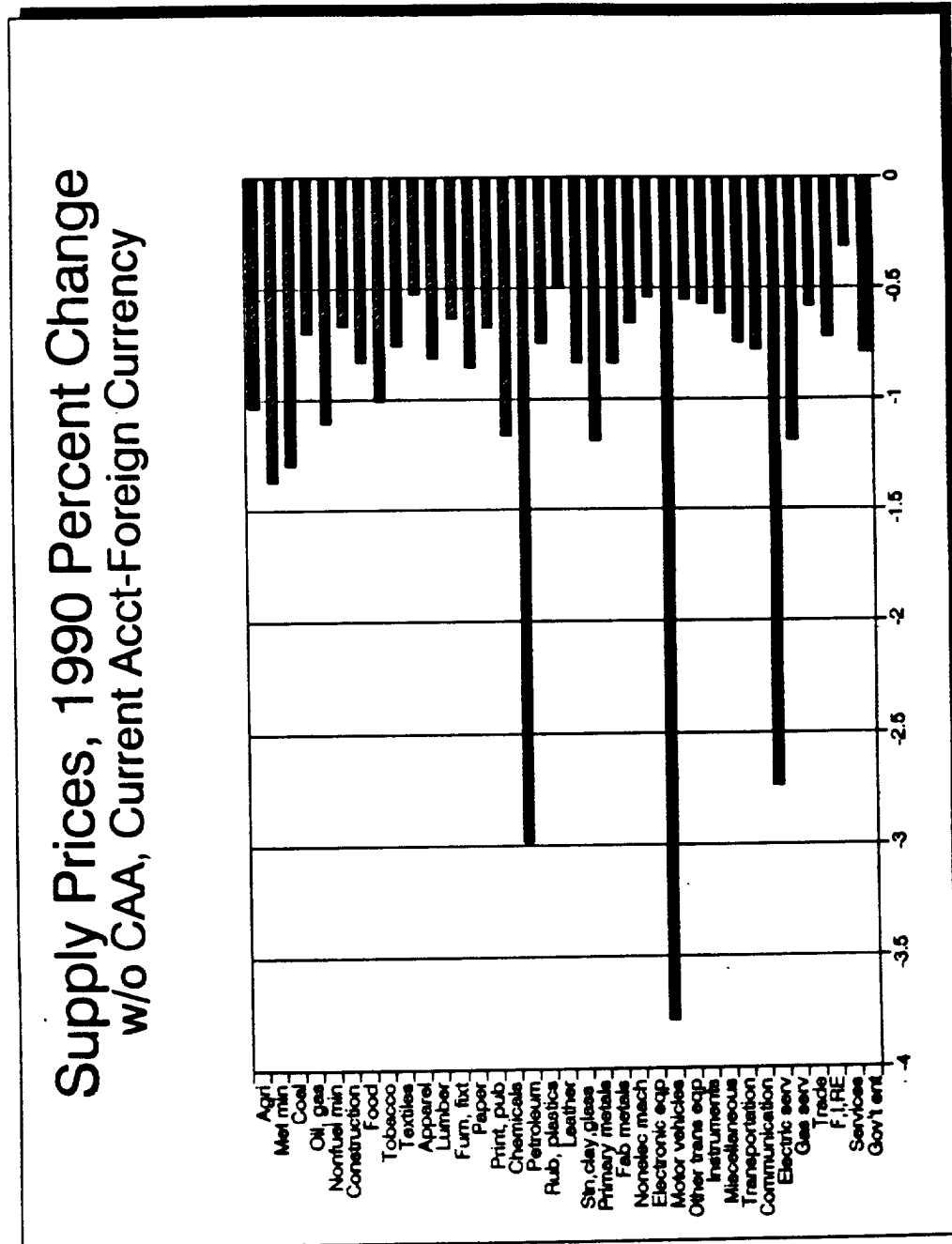


Figure D.5

Supply Prices, 1990 Percent Change w/o CAA, Current Acct-Real US Dollars

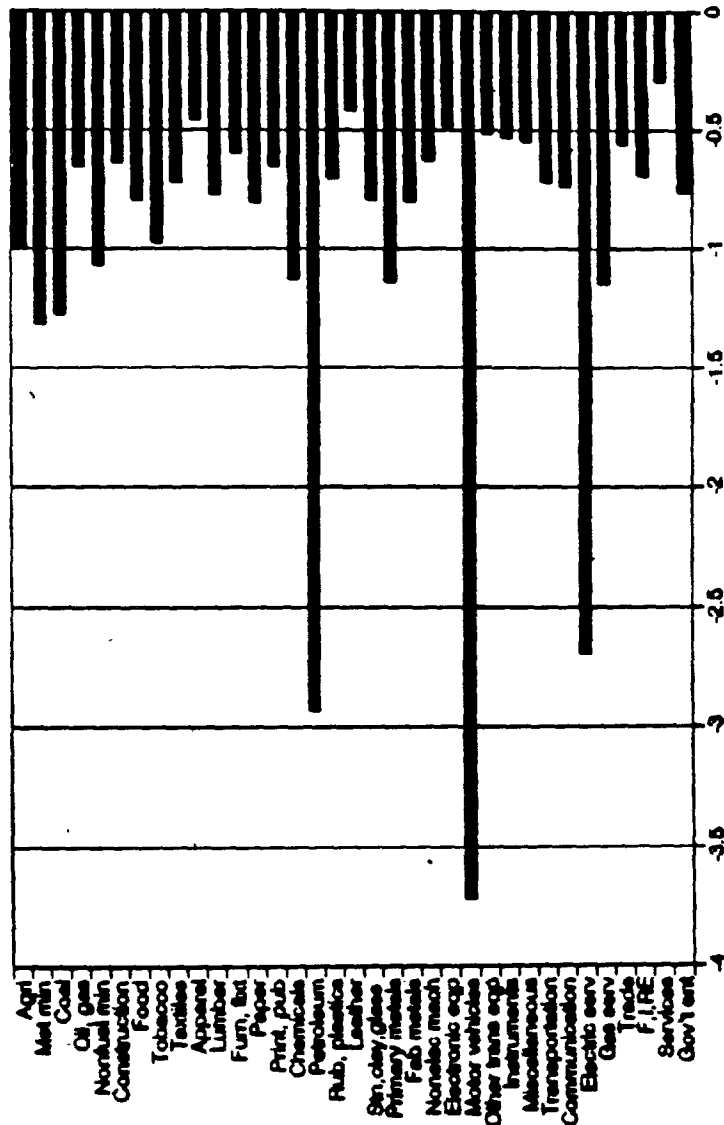


Figure D.6

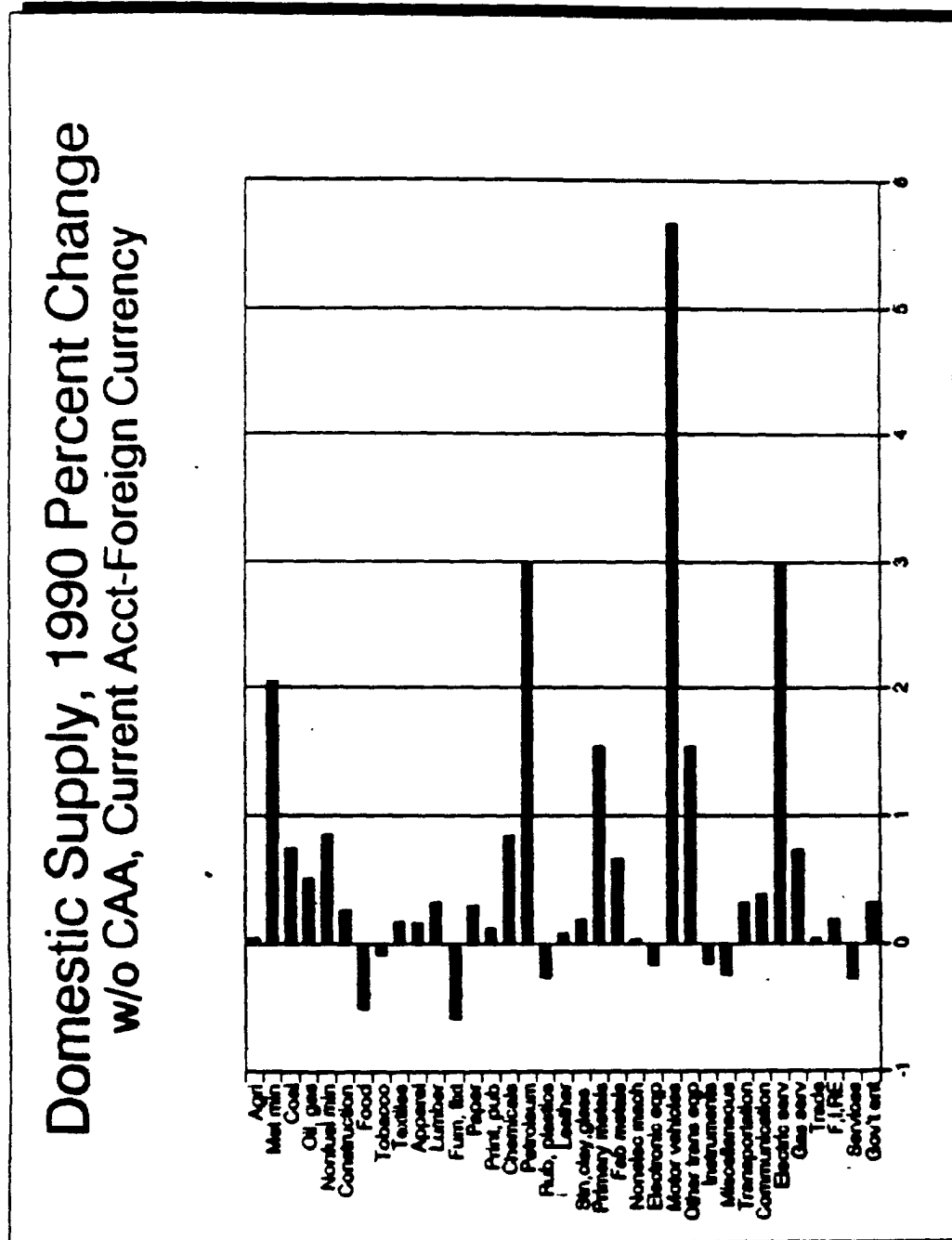


Figure D.7

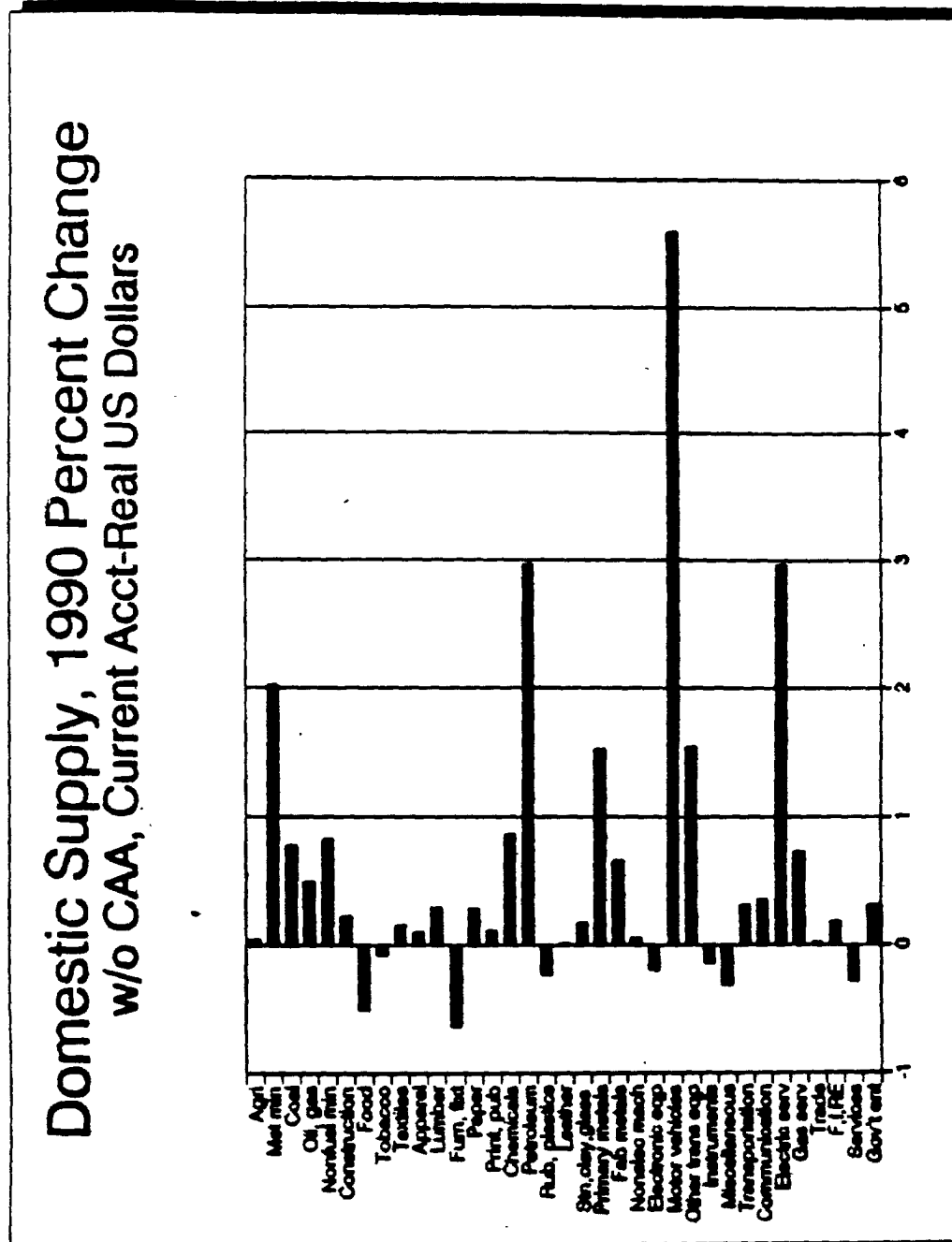


Figure D.8

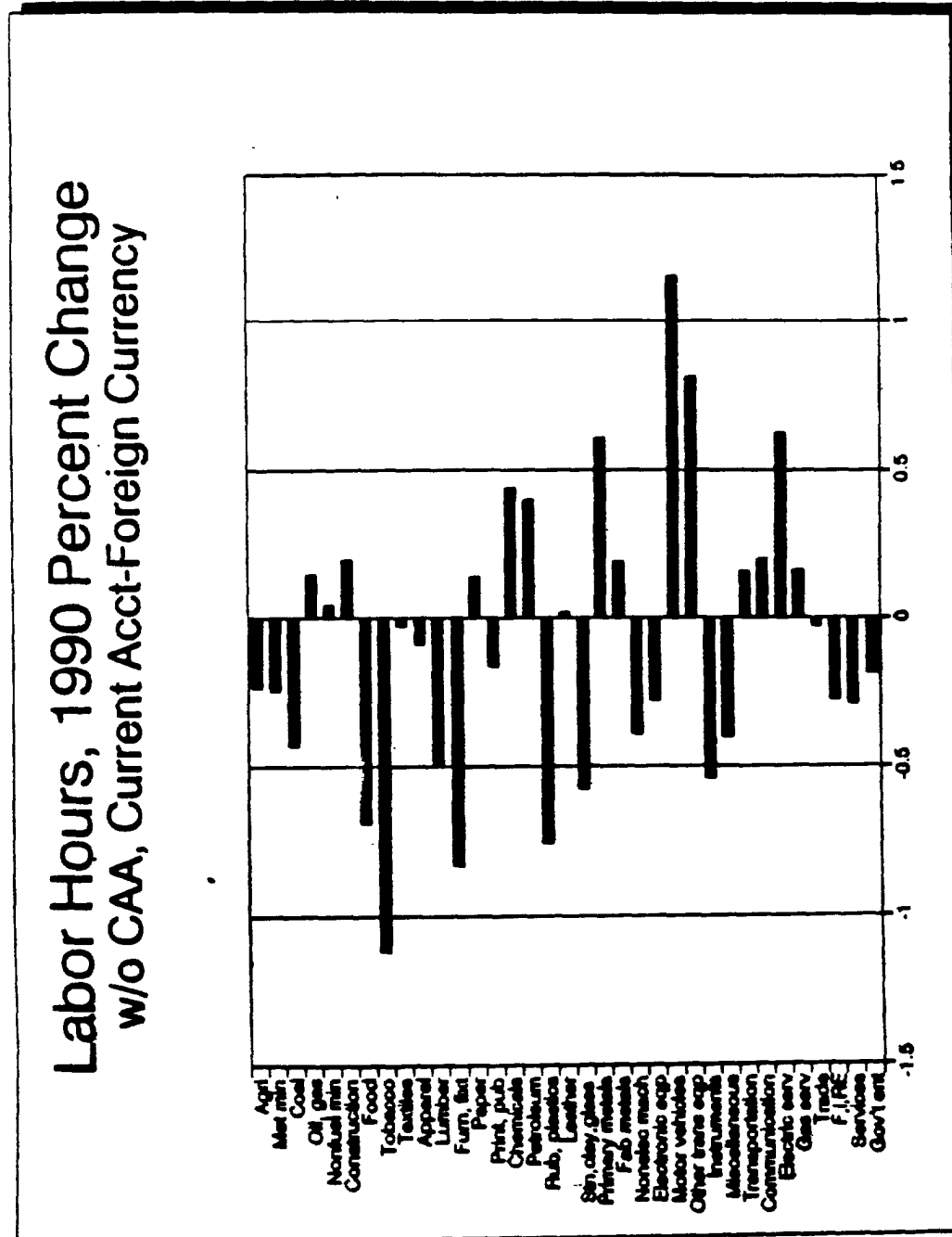


Figure D.9

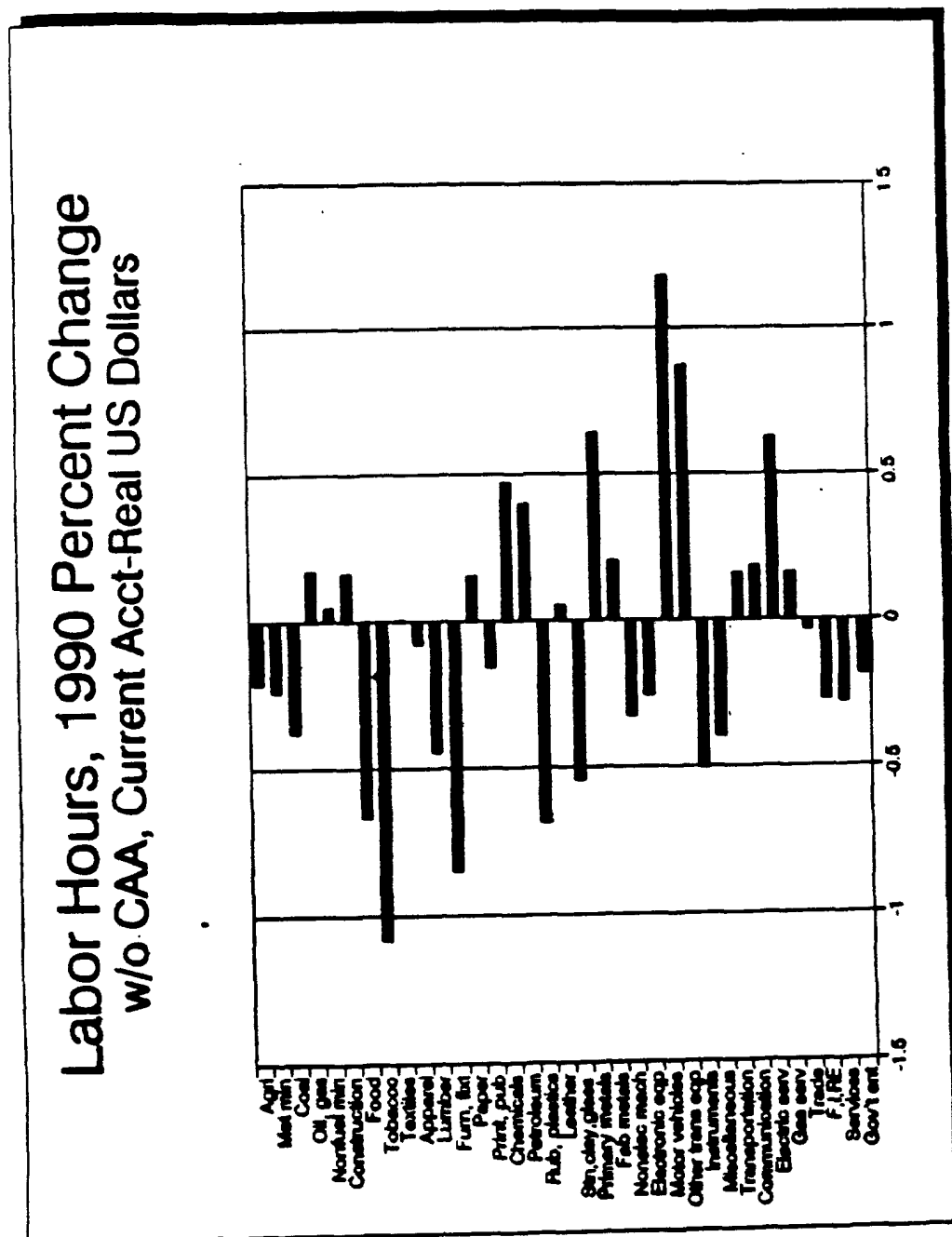


Table D.1
Equivalent Variations And Social Welfare

*Equivalent Variations in Lifetime Expenditure upon
Elimination of the CAA Compliance Costs
Current Surplus Constant in Foreign Currency
1990 Dollars*

	Size						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	4334	4389	4377	4311	4336	4238	4226
Med	8294	8402	8376	8247	8296	8102	8076
High	15833	16049	15999	15740	15840	15451	15398
	Age						
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>	
Low	4571	4415	4311	4269	4230	4184	
Med	8766	a455	a247	8161	8084	7992	
High	16779	16156	15740	15569	15417	15231	
	Region				Race		
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>	
Low	4311	4360	4240	4315	4311	4056	
Med	8247	8346	8103	8254	a247	7737	
High	15740	15937	15454	15756	15740	14729	
	Locale		Sex				
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>			
Low	4311	4411	4311	4230			
Med	8247	8445	8247	8086			
High	15740	16137	15740	15418			

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.
Low, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table D.2
Equivalent Variations And Social Welfare

*Equivalent Variations as a Proportion of Lifetime Expenditure
upon Elimination of the CAA Compliance Costs
Current Surplus Constant in Foreign Currency*

	Size						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	.00879	.00890	.00887	.00874	.00880	.00860	.00857
Med	.00841	.00852	.00849	.00836	.00841	.00821	.00819
High	.00803	.00814	.00811	.00798	.00803	.00783	.00781
	Age						
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>	
Low	.00927	.00895	.00874	.00866	.00858	.00848	
Med	.00889	.00857	.00840	.00827	.00820	.00810	
High	.00851	.00819	.00798	.00789	.00782	.00772	
	Region				Race		
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>	
Low	.00874	.00884	.00860	.00875	.00874	.00822	
Med	.00836	.00846	.00822	.00837	.00836	.00784	
High	.00798	.00808	.00783	.00799	.00798	.00746	
	Locale		Sex				
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>			
Low	.00874	.00895	.00874	.00858			
Med	.00836	.00856	.00836	.00820			
High	.00798	.00818	.00798	.00782			

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.

Low, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table D.3
Equivalent Variations And Social Welfare

*Change in Social Welfare upon
Elimination of the CAA Compliance Costs
Current Surplus Constant in Foreign Currency
Billions of 1990 Dollars*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	490	696	-206
Least	618	696	-79

*Change in Social Welfare as a
Proportion of Lifetime Expenditure*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	.00474	.00672	-.00199
Least	.00597	.00672	-.00076

Index of Relative Progressivity

<u>Weight given to equality</u>	<u>Index</u>
Greatest	.00063
Least	.00077

Table D.4
Equivalent Variations and Social Welfare

*Equivalent Variations in Lifetime Expenditure upon
Elimination of the CAA Compliance Costs
Current Surplus Constant in Real US Currency
1990 Dollars*

	<u>Size</u> <u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	4293	4348	4336	4271	4296	4200	4186
Med	8211	8321	8296	8168	8217	8024	7998
High	15674	15890	15841	15585	15684	15298	15246

	<u>Age</u> <u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
Low	4529	4374	4271	4229	4192	4145
Med	8684	8374	8168	8083	8007	7916
High	16616	15997	15585	15416	15266	15080

	<u>Region</u>				<u>Race</u>	
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>
Low	4271	4321	4200	4275	4271	4018
Med	8168	8266	8025	8174	8168	7660
High	15585	15782	15302	15599	15585	14571

	<u>Locale</u>		<u>Sex</u>	
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>
Low	4271	4371	4271	4191
Med	8168	8366	8168	8006
High	15585	15982	15585	15262

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.
Low, medium, and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table D.5
Equivalent Variations And Social Welfare

*Equivalent Variations as a Proportion of Lifetime Expenditure
upon Elimination of the CAA Compliance Costs
Current Surplus Constant in Real US Currency*

	Size						
	<u>Size 1</u>	<u>Size 2</u>	<u>Size 3</u>	<u>Size 4</u>	<u>Size 5</u>	<u>Size 6</u>	<u>Size 7+</u>
Low	.00871	.00882	.00879	.00866	.00871	.00852	.00849
Med	.00833	.00844	.00841	.00828	.00833	.00814	.00811
High	.00795	.00806	.00803	.00790	.00795	.00776	.00728

	Age					
	<u>16-25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
Low	.00919	.00887	.00866	.00858	.00850	.00841
Med	.00880	.00849	.00828	.00819	.00812	.00802
High	.00842	.00811	.00790	.00781	.00774	.00764

	Region				Race	
	<u>NE</u>	<u>Midwest</u>	<u>South</u>	<u>West</u>	<u>White</u>	<u>NWhite</u>
Low	.00866	.00876	.00852	.00867	.00866	.00815
Med	.00828	.00838	.00814	.00829	.00828	.00777
High	.00790	.00800	.00776	.00791	.00790	.00739

	Locale		Sex	
	<u>NFarm</u>	<u>Farm</u>	<u>Male</u>	<u>Female</u>
Low	.00866	.00886	.00866	.00850
Med	.00828	.00848	.00828	.00812
High	.00790	.00810	.00790	.00774

Reference household: Size 4, Age 35-44, Northeast, Nonfarm, White, Male.
Low, medium and high refer to the time paths of total expenditure equal to one half the average, the average, and twice the average of total lifetime expenditure.

Table D.6
Equivalent Variations And Social Welfare

*Change in Social Welfare upon
Elimination of the CAA Compliance Costs
Current Surplus Constant in Real US Currency
Billions of 1990 Dollars*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	486	687	-201
Least	612	687	-75

*Change in Social Welfare as a
Proportion of Lifetime Expenditure*

<u>Weight given to equality</u>	<u>Welfare</u>	<u>Efficiency</u>	<u>Equity</u>
Greatest	.00469	.00663	-.00194
Least	.00591	.00663	-.00073

Index of Relative Progressivity

<u>Weight given to equality</u>	<u>Index</u>
Greatest	.00064
Least	.00078

Figure D. 10

Equivalent Variations in Wealth Foreign, Medium Expenditure in \$90

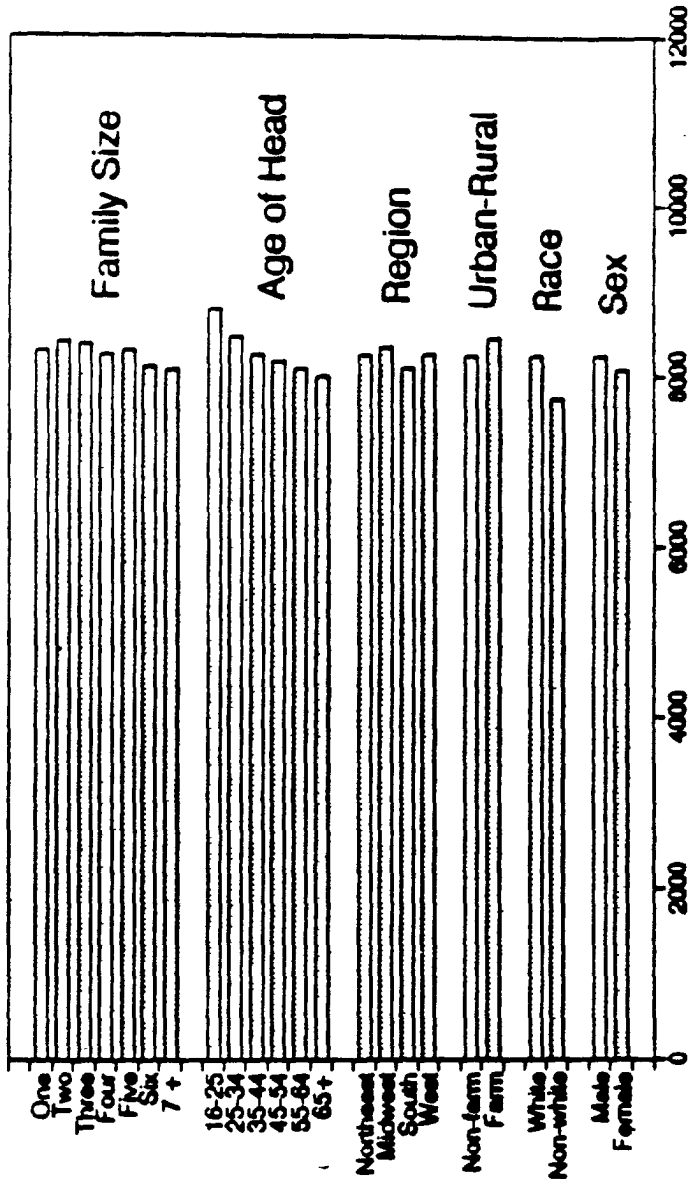


Figure D.11

